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# Scraping and Sanding

## Potential Environmental Impacts:

Hull paints often contain heavy metals and other toxins. Sanding chips and dust that fall onto the ground can enter a marina basin through stormwater runoff. Paint chips and sanding debris can be particularly dangerous when shellfish ingest them and other animals, including humans, then ingest the shellfish.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> You must determine if your sanding dust is hazardous and manage accordingly [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11]. <input type="checkbox"/> If the sanding dust is not hazardous, it must be handled as a Special Waste. This waste may be disposed of at a solid waste landfill if the site meets the design criteria for municipal solid waste landfills. [DHEC R. 61-107.258].
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## Best Management Practices:

Designate indoor or upland area	<input type="checkbox"/> Conduct sanding and scraping away from the water's edge. Designate an indoor or upland area for debris-producing maintenance such as scraping, sanding, and sandblasting. The boat maintenance area can be a temporary structure or plastic sheeting provided to minimize the spreading of dust and windblown material. The work area should be well marked with signs.
Use tarps	<input type="checkbox"/> Place drop cloths or tarps under vessels when sanding or scraping. <input type="checkbox"/> Weight the bottom edges of tarps and drop clothes to keep them in place.
Impervious pad	<input type="checkbox"/> Consider installing an impervious pad for conducting debris-producing maintenance.
Clean up immediately	<input type="checkbox"/> Clean up all debris, trash, sanding dust, and paint chips immediately following any maintenance or repair activity. <input type="checkbox"/> When sanding or grinding hulls over a paved surface, vacuuming or sweeping loose paint particles is the preferred cleanup method. Do not hose the debris away. <input type="checkbox"/> Dispose of water-based (non-hazardous) waste paint chips and sanding waste in a covered dumpster or other covered solid waste receptacle.
Non-windy days	<input type="checkbox"/> Avoid scraping or sanding on windy days, unless conducting activity in an enclosed maintenance structure.
Use vacuum sanders	<input type="checkbox"/> Use dustless or vacuum sanders when sanding. These tools can collect over 98% of dust generated instead of releasing it into the air. Workers can use this equipment without full suits or respirators and have fewer cleanups when the job is done. <input type="checkbox"/> Require customers and contractors to use dustless or vacuum sanders. Rent or loan the equipment to them. <input type="checkbox"/> Post signs indicating the availability of the dustless or vacuum sanders.
Provide covered container	<input type="checkbox"/> Provide a covered collection drum for the dust from vacuum sanders and other scraping debris.

In water activities	<input type="checkbox"/> Restrict or prohibit sanding and scraping boats that are in the water, to the greatest extent practicable. <input type="checkbox"/> If sanding, scraping, or grinding must take place while the boat is in the water, use tarps and sheeting installed between the vessel being worked on and the floats or walking surface to prevent dust, paint chips, debris, or other materials from falling or being blown into the water. The sheeting should have a tight seal to the vessel and adjacent surfaces to prevent leakage of any paint chips or dust outside the work area. Remove the sheeting carefully to prevent the loss of accumulated waste material into the water.
Minimize scraping need	<input type="checkbox"/> Where feasible, boat maintenance and storage practices that minimize the need for scraping and sanding should be encouraged.

**Relevant Sections and Appendices:**

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Abrasive Blasting section.

# Paint Stripping

## Potential Environmental Impacts:

Many paint strippers are solvent-based, and contain chemicals that are dangerous to humans. Some are flammable and most can cause water and air pollution if not handled properly. Toxic chemicals in paint strippers may include methylene chloride (also called dichloromethane, or DCM), methyl ethyl ketone (or 2-Butanone), acetone, toluene, methanol, N-methylpyrrolidone (NMP), or xylene. There are some less environmentally damaging and less hazardous paint strippers available on the market.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> A hazardous waste determination must be conducted to establish whether or not disposal of used paint strippers is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11]. A hazardous waste determination must also be conducted on any materials used to clean up a spill. Manage waste accordingly.
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## Best Management Practices:

Use alternatives	<input type="checkbox"/> Consider alternatives to chemical paint stripping depending on the characteristics of the surface being stripped, the type of paint being removed, and the volume and type of waste produced. Alternatives include scraping, sanding, and/or abrasive blasting. Use a heat gun to remove paint and varnish where appropriate. <input type="checkbox"/> If paint strippers must be used, use soy-based or water-based products that are less hazardous.
Reduce leftovers	<input type="checkbox"/> Use only the minimum amount of paint stripper needed for a job.
Reduce evaporation	<input type="checkbox"/> Prevent evaporation by using tight fitting lids or stoppers. Reducing evaporation protects air quality, saves product and money.
Reduce spills	<input type="checkbox"/> Reduce the chance of spills during transport by storing unused paint stripper where it's used most in the shop. Place the product on an impervious base.
Educate and train employees	<input type="checkbox"/> Encourage careful use by informing all workers and operators of the hazardous nature of solvents and the purchasing and recycling costs. <input type="checkbox"/> Train employees to use less paint stripper, to properly store new and used paint strippers, to use wise clean-up procedures, and to prevent leaks and spills.

## Relevant Sections and Appendices:

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Abrasive Blasting section and Scraping and Sanding section.

# Prepping and Painting Boat Bottoms

## Antifouling Paint

### Potential Environmental Impacts:

Most antifouling paint contains elemental copper, cuprous oxide (a copper compound), or tin-based compounds (tributyl tin) that kill organisms attempting to attach to a painted surface. By design, antifouling paints are toxic to marine life and can be absorbed by edible fish and shellfish. Concentrations of tributyltin (TBT) as low as a few parts per trillion have caused abnormal development and decreased reproductive success in oysters, clams, and snails (EPA, 1993). The toxins in antifouling paints enter the environment through spillage, sanding, sand blasting, or scraping. Antifouling paint chips left on the ground or driveway can be transported into the water by stormwater runoff. The toxicants in antifouling paint can be passed up the food chain from mussels and worms to fish, birds, and humans.

### Legal Requirements:

No TBT on vessels < 25m	<input type="checkbox"/> The use of anti-fouling tributyltin (TBT) containing paints is prohibited on vessels less than 25 meters (82 feet) in length. Vessels with aluminum hulls, which quickly corrode from cuprous oxide anti-foulant coatings, are also allowed to use TBT [Organotin Antifouling Paint Control Act 33 U.S.C. 2401].
Make hazardous waste determination	<input type="checkbox"/> A hazardous waste determination must be conducted to establish whether or not disposal of traditionally used antifouling paints, in solid or liquid form, is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; DHEC r.61-79.262.11]. A hazardous waste determination must also be conducted on any materials used to clean a spill.
Abrasive blast media	<input type="checkbox"/> Abrasive Blast Media Containing Pesticides (such as TBT paint chippings) must be handled as special waste. This waste may be disposed of at a solid waste landfill if the site meets the design criteria for municipal solid waste landfills [DHEC R. 61-107.258].

### Best Management Practices:

Use alternative products	<input type="checkbox"/> Switch to long-lasting, low-toxicity antifouling paint. <input type="checkbox"/> Recommend antifouling paints containing the minimum amount of toxin necessary for the expected condition to your customers. Stock only those in the ship store. <input type="checkbox"/> Stay informed about antifouling products, like Teflon, silicone, polyurethane, and wax that have limited negative impacts. Pass on the information to your customers.
Don't use in fresh water	<input type="checkbox"/> Discourage use of antifouling paint on boats kept in fresh water.
Non-moored boats	<input type="checkbox"/> Recommend that boats that are rack stored or trailered use alternatives to antifouling paint such as polyurethane, bottom wax, or non-metallic epoxies, since antifouling paint is not necessary for boats that are not continuously in the water.

Sanding	<input type="checkbox"/> Use dust-collecting sanders when sanding anti-fouling paint. <input type="checkbox"/> Sandblasting is not recommended for removal of antifouling paint. <input type="checkbox"/> Sweep and collect paint chips (don't hose) immediately after scraping or sanding.
Mix away from water	<input type="checkbox"/> Mix paints and solvents away from the water and prevent dripping into the water. Avoid mixing paint or cleaning brushes on open floats or other structures over the water.
Use drip pans, tarps, and sheeting	<input type="checkbox"/> Use drip pans, tarps, and sheeting to contain droppings and spilled materials. Drip pans should be used for all paint mixing, solvent transfer, or equipment clean up operations unless the operations are conducted in controlled areas away from storm drains, surface waters, shorelines, piers, docks, or floats.
Weight tarp bottoms	<input type="checkbox"/> Weight the bottom edges of tarps and plastic sheeting to keep them in place.
Reduce leftovers	<input type="checkbox"/> Mix only enough paint necessary for a job. <input type="checkbox"/> Save excess or unused antifouling paint for future uses.
Reuse solvents	<input type="checkbox"/> Reuse solvents and thinners by draining the clean product off the top once solids settle out.
Prohibit in-water bottom cleaning	<input type="checkbox"/> Prohibit in-water bottom cleaning, hull scraping, or any process that occurs underwater that could remove antifouling paint from the boat hull. It is impossible to treat what's cleaned from the boat bottom. <input type="checkbox"/> If in-water bottom cleaning is allowed, require that customers or contractors use only soft sponges to clean marine growth and use stainless steel pads or brushes only on unpainted metal areas (never on bottom paint). Colored plumes of paint in the water near underwater cleaning activity should not occur.

#### Relevant Sections and Appendices:

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Abrasive Blasting section for sandblasting information.
- ⇒ Scraping and Sanding section.

# Hull and Topside Painting

## Potential Environmental Impacts:

Hull and topside paints may be toxic and inhalation may cause cancer. If spilled, they may harm aquatic life and water quality. Additionally, the fumes released by some paints can contribute to air pollution.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> A hazardous waste determination must be conducted on painting wastes and any materials used to clean up spilled paint to establish whether or not their disposal is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; DHEC R. 61-79.262.11].
Paint can residue	<input type="checkbox"/> Paint cans and other containers that have residues of hazardous (e.g., oil-based) paints must be handled as hazardous waste unless they have been “emptied,” which means: <ul style="list-style-type: none"> <li>▪ Drained of all material that can be removed from them by normal methods (e.g., pouring or pumping), AND</li> <li>▪ No more than one inch (or 3% by weight) of residue remains in the container [40 CFR 261.7; DHEC R.61-79.262.34].</li> </ul> <input type="checkbox"/> “Emptied” containers of hazardous paints and those that have dried out residues of non-hazardous (e.g., latex) paints may be recycled as scrap metal, or disposed of in the regular trash.
Report spills	<input type="checkbox"/> If paint or varnish that is discharged into the navigable waters of the state causes a visible sheen, report the spill to the National Response Center at (800) 424-8802 [§311 of the Clean Water Act; 33 USC 1321].

## Best Management Practices:

Storage	<input type="checkbox"/> Store all paint in a centralized, covered area. Return all unused paints to that area and immediately and properly manage empty containers.
Leftover paint	<input type="checkbox"/> Avoid the problem of having leftover paint by mixing only as much paint as is needed for a given job. <input type="checkbox"/> Consider sharing leftover paints with customers or setting up an exchange area for customers to swap unused items. Contact the local SCDHEC regional office to ensure a leftover paint swap area does not change your hazardous waste generator status.
In-water painting	<input type="checkbox"/> Limit in-water painting to interior surfaces and bright work, where paint materials and spills can be contained and prevented from entering the water. Do not allow in-water hull scraping or any process that occurs underwater to remove paint from the boat hull.
Small containers	<input type="checkbox"/> Although it is not advised to conduct painting while the boat is in the water, if it must be done, transfer the paint to the vessel in a small (less than one gallon), tightly covered container. Small containers mean small spills.



Designate area	<input type="checkbox"/> Designate an upland area for debris-producing maintenance activities such as sanding and painting. <input type="checkbox"/> Do as much work as possible away from the water, including mixing paints and/or cleaning brushes.
Use tarps	<input type="checkbox"/> Use tarps or drop cloths to collect drips. Weight the bottom edges of tarps and plastic sheeting to keep them in place.
Use drip pans	<input type="checkbox"/> Use drip pans for all paint mixing, paint transfer, and/or equipment clean up. <input type="checkbox"/> Material captured in drip pans should be used or returned to their original container if possible.
Use alternative products	<input type="checkbox"/> Use low-VOC, high solids content, and water-based paints and surface preparation products instead of traditional paints and primers. <input type="checkbox"/> Encourage the use of non-toxic, high bonding, and easily cleaned hull coatings.
Use brushes and rollers	<input type="checkbox"/> Use brushes and rollers instead of paint sprayers whenever possible, since paint spraying is potentially more wasteful and more harmful to the environment.
Reuse solvents	<input type="checkbox"/> Reuse solvents and thinners by draining the clean product off the top once solids settle out.
Spills	<input type="checkbox"/> Contain and clean up spilled paint or varnish immediately.

**Relevant Sections and Appendices:**

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix E and Spills section for spill reporting requirements and actions.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Paint Spraying section.

# Abrasive Blasting

## Potential Environmental Impacts:

In abrasive blasting, sand, glass or plastic bead, walnut shells, metal shot or grit, sodium bicarbonate, or dry ice pellets are used with air pressure or water pressure to remove paint. Traditional abrasive blasting of large boat hulls is a messy job resulting in many hundreds of pounds of spent abrasive mixed with bottom paint. While the abrasive can be relatively cheap, the labor is costly and the potential environmental impacts are large.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> You must determine if your blasting wastes are hazardous [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11] and manage accordingly.
Abrasive blast media	<input type="checkbox"/> Abrasive Blast Media Containing Pesticides (such as TBT paint chippings) must be handled as special waste. This waste may be disposed of at a solid waste landfill if the site meets the design criteria of municipal solid wastes landfills. [DHEC R.61-107.258].
Fugitive emissions	<input type="checkbox"/> Fugitive particulate emissions shall be controlled in a manner, or to a degree, that it does not create an undesirable level of pollution [DHEC R. 61-62.6].

## Best Management Practices:

Use alternatives	<input type="checkbox"/> Consider alternatives to abrasive blasting on-site, such as dustless sanders or contracting the work off-site.
Containment and location	<input type="checkbox"/> If abrasive blasting must be done, perform it within well-ventilated spray booths or plastic tarp enclosures away from the water to minimize the spreading of dust and windblown material, and to prevent residue from being carried into surface waters. <input type="checkbox"/> Prohibit uncontained blasting in the marina.
Blast on non-windy days	<input type="checkbox"/> If tarp enclosures are used, avoid blasting on windy days. Because tarps are not rigid, they do not eliminate wind flow through the blasting area, and so they allow the wind to carry blasting material and residue into surface waters.
Waste storage	<input type="checkbox"/> Store spent sandblasting grit, scrapings, and debris under cover in a manner that minimizes contact with process water or stormwater.
Recycle blast media	<input type="checkbox"/> Recycle used blast media. Investigate companies that recycle used blast media into new media or other products.

## Relevant Sections and Appendices:

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.

# Paint Spraying

## Potential Environmental Impacts:

Paint spraying has potential air and water quality impacts. Most paints contain volatile organic compounds (VOCs) that evaporate quickly and are ignitable. Many paints are also toxic. When released to the atmosphere, VOCs combine with combustion emissions of nitrogen oxides (NO<sub>x</sub>) to form ground level ozone, which damages lungs and degrades many materials. Marine paint may be toxic to aquatic and marine life.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> You must determine if your painting wastes (including leftover paints, spray gun solvents, and rags), or any materials used to clean a spill, are hazardous [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11] and manage accordingly.
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## Best Management Practices:

Use brushes and rollers	<input type="checkbox"/> Whenever possible, use brushes and rollers instead of paint sprayers since paint spraying is potentially more wasteful and more harmful to the environment than applying paint by hand.
<u>Location preferences:</u> Shipyard  Inside  Inland with sheeting  Covered slips with sheeting	<input type="checkbox"/> Avoid unprotected paint spraying. Paint spraying may be conducted (in order of preference): <ol style="list-style-type: none"> <li>1. Inside of commercial shipyard facilities that are designed for this activity;</li> <li>2. Inside designated structures with ventilation and filter systems;</li> <li>3. At designated shore-side areas away from open water, with temporary structures or plastic sheeting provided to minimize the spreading of overspray; or</li> <li>4. In covered slips, with tarps and sheeting installed with a tight seal between the vessel being worked on and the floats or walkway surface. Be sure to remove the protective sheeting with care to prevent loss of accumulated waste material into the water.</li> </ol> <input type="checkbox"/> Prohibit paint spraying on the water without protective sheeting.
Use high transfer efficiency equipment	<input type="checkbox"/> Use spray equipment with high transfer efficiency. Paint guns used in spray booths should be either High Volume Low Pressure (HVLP) or High Efficiency Low Pressure (HELP), which are rated at 65% efficient paint transfer. HVLP guns can reduce overspray by 25% to 50%. Electrostatic spraying also requires less pressure, produces little overspray, and uses relatively little paint.
Alternative products	<input type="checkbox"/> Encourage the use of non-toxic, high bonding, and easily cleaned hull coatings.
Non-windy days	<input type="checkbox"/> If spraying outdoors with protective sheeting, avoid working on windy days when controlling the protective covering and the paint spray is difficult.

Reduce leftovers	<input type="checkbox"/> Limit the amount of leftover paint and decrease solvent use by using a smaller paint spray gun cup.
Reuse solvents	<input type="checkbox"/> Reuse solvents and thinners by draining the clean product off the top once solids settle out.
Paint gun cleaning	<input type="checkbox"/> Clean paint guns in an enclosed gun cleaner and capture all solvents.
Solvent disposal	<input type="checkbox"/> Spent paint gun solvent must be treated as hazardous waste and should never be discharged into drains or onto the ground. <input type="checkbox"/> Solvents should be recycled either in an onsite distillation unit or by a permitted recycling facility. <input type="checkbox"/> Evaporation of waste solvent or waste solvent-based paint constitutes illegal disposal of hazardous waste.

**Relevant Sections and Appendices:**

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Rags and Oil Absorbent Pads section.

# Compound Waxing

## Potential Environmental Impacts:

Whether a hull is slightly oxidized or heavily oxidized and stained or whether a one or two-step process is required to improve the luster of the hull, there are few environmental impacts from compounding and waxing a hull. Basic pollution prevention techniques and proper management of the substances used to restore fiberglass hulls will help keep waxes and cleaners out of the environment.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> Most stain removers, rubbing compounds and waxes are not hazardous materials, although some have hazardous constituents. If any of the products you use contain hazardous ingredients, you must determine if the waste materials that are generated are hazardous [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11] and manage accordingly.
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## Best Management Practices:

Use non-hazardous	<input type="checkbox"/> Check all product Material Safety Data Sheets and purchase those that are non-hazardous. <input type="checkbox"/> If possible, use phosphate free, biodegradable and non-toxic soap when prepping a hull. When removing tough stains, use only as much stain remover as necessary, or use a more abrasive rubbing or polishing compound.
Location	<input type="checkbox"/> Conduct compounding and waxing away from the water.

## Relevant Sections and Appendices:

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Rags and Oil Absorbent Pads section.

# Varnishing

## Potential Environmental Impacts:

Spills of oil-based varnishes may be detrimental to the marine and aquatic environment. Since they are petroleum-based, spills may have similar impact as oil spills. Chemicals in varnishes can be highly flammable and potentially harmful to human health.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> Many varnishes are composed of hazardous materials. You must determine if your waste varnish is hazardous [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11]. A hazardous waste determination must also be conducted for any materials used to clean a spill. Manage hazardous waste accordingly.
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## Best Management Practices:

Reduce leftovers	<input type="checkbox"/> Avoid the disposal problem of leftover varnish by mixing only as much as is needed for a given job. <input type="checkbox"/> Consider sharing leftover varnishes with customers or setting up an exchange area for customers to swap unused items.
Use alternatives	<input type="checkbox"/> Use less hazardous, water-based varnishes that pose less of a threat to human health or the environment.
Clean up spills appropriately	<input type="checkbox"/> In case of spills of varnish on land, use absorbent material to clean it up and collect any contaminated soils. <input type="checkbox"/> Spills in waterways should be contained and mopped up with booms or pads that repel water but absorb petroleum. <input type="checkbox"/> Do not use soaps or detergents to clean up spills. They spread out the problem rather than helping and the detergent is toxic to marine life.

## Relevant Sections and Appendices:

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Spills section.

# Teak Refinishing

## Potential Environmental Impacts:

Teak cleaners that contain acids and caustics can be toxic to marine life when spilled in the water.

## Legal Requirements:

Make hazardous waste determination	<input type="checkbox"/> A hazardous waste determination must be conducted for spent teak cleaner and for any materials used to clean a spill [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11]. Manage hazardous waste accordingly.
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## Best Management Practices:

Use alternative products	<input type="checkbox"/> Avoid teak cleaners containing acids (such as phosphoric acid or oxalic acid) or those labeled “caustic, corrosive, or acidic.” <input type="checkbox"/> Clean teak with a mild, phosphate-free detergent with bronze wool, if possible.
Use dustless sander	<input type="checkbox"/> If sanding teak, use a dustless or vacuum sander.
Location	<input type="checkbox"/> If possible, conduct teak refinishing in upland maintenance area. If not possible, use safer cleaners and avoid flushing excess teak cleaner and teak oil into the marina basin.

## Relevant Sections and Appendices:

- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.

# Fiberglassing

## Potential Environmental Impacts:

The processes involved in fiberglassing, whether using epoxy, polyester, or vinylester resins for small or big jobs, can have environmental impacts. Some of the materials used in the fiberglassing process can be dangerous to workers. Some resins, catalysts and the solvents used for cleanup can be flammable, irritate the skin and respiratory system, and may cause cancer.

## Legal Requirements:

Make hazardous waste determination	<ul style="list-style-type: none"><li><input type="checkbox"/> Styrene, the primary component of gelcoat and other polyester resins, is an ignitable chemical. Therefore, cans or containers of waste resins may be regulated as ignitable hazardous waste. Certain hardeners and accelerators may also be regulated as hazardous waste [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11].</li><li><input type="checkbox"/> Chlorinated solvents and the rags used to apply them must be managed as hazardous waste [RCRA; 40 CFR 262.11; DHEC R.61-79.262.34].</li></ul>
Hazardous waste storage >10,000 lbs	<ul style="list-style-type: none"><li><input type="checkbox"/> If you store over 10,000 pounds of any hazardous substance requiring a Material Safety Data Sheet (such as a solvent), you must comply with the reporting requirements under Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) [40 CFR 355].</li></ul>
Hull or deck manufacture	<ul style="list-style-type: none"><li><input type="checkbox"/> If you manufacture hulls or decks for recreational boats made from fiberglass or aluminum <i>and</i> emit 10 tons or more per year of any one federally designated hazardous air pollutant (HAP) like styrene, toluene, or xylene, and/or 25 tons or more per year of all HAPs combined, several EPA air emission standards must be followed [40 CFR 63, Subpart VVVV].</li></ul>

## Best Management Practices:

Minimize waste	<ul style="list-style-type: none"><li><input type="checkbox"/> Minimize waste by working with small batches of resin.</li></ul>
No liquid hardener in trash	<ul style="list-style-type: none"><li><input type="checkbox"/> Avoid putting liquid hardener in the trash, since it can spontaneously combust when mixed with sawdust and other materials.</li></ul>

## Relevant Sections and Appendices:

- ⇒ Appendix A for hazardous substance management information.
- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Rags and Oil Absorbent Pads section.



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# Emergency Planning

## Potential Environmental Impacts:

Being adequately prepared for emergency action can potentially reduce the overall environmental impact of a spill, fire, or other event.

## Legal Requirements:

SPCC Plan	<input type="checkbox"/> You need to prepare a Spill, Prevention, Control, and Countermeasure (SPCC) Plan, which outlines a facility-wide plan to prevent and clean up oil and gasoline spills [Clean Water Act, 40 CFR 112] if your facility stores gas or oil: <ol style="list-style-type: none"> <li>1. Above-ground in any size tank(s) with a total aggregate volume over 1,320 gallons (containers of less than 55 gallons and/or permanently closed storage tanks are exempt from the total); or</li> <li>2. In underground storage tanks with total capacity greater than 42,000 gallons (unless the tanks are compliant with the state requirement for USTs)</li> </ol>
Hazardous waste contingency plan	<input type="checkbox"/> If your facility is a Large or Small Quantity Generator of hazardous waste, you must prepare a hazardous waste contingency plan [40 CFR 262.34; DHEC R. 61-79.265.50-56].
NFPA	<input type="checkbox"/> If you have a marine service station, you must design and manage it to prevent spills, fire, and other dangers as required in the National Fire Protection Association's (NFPA) <i>Automotive and Marine Service Station Code</i> (NFPA 30A). These requirements are adopted locally. Check with your municipal fire marshal for local requirements.
Storage of quantities of hazardous materials	<input type="checkbox"/> If you store hazardous materials in quantities above certain threshold amounts, you must report storage of that substance under the Emergency Planning and Community Right-to-Know Act of 1986 [42 USC 11001, and 42 CFR 355]. <input type="checkbox"/> Keep copies of Material Safety Data Sheets (MSDS) for all hazardous substances used at your facility [Occupational Safety and Health Act of 1970, 29 USC Section 657; DHEC R.61-79.262.34].
Report spills	<input type="checkbox"/> Any spill or release of petroleum that results in a sheen on the waters of the state or threatens the waters of the State to include groundwater must be reported immediately to the: <ol style="list-style-type: none"> <li>1. SCDHEC Emergency Response Section at 1-888-481-0125 and</li> <li>2. National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].</li> </ol>

## Best Management Practices:

Assess hazards	<input type="checkbox"/> Assess potential hazards at your facility, both manmade (fuel spill or fire) and natural (tsunami or earthquake).
<u>Spill response kits:</u>  Convenient location  Kit materials	<input type="checkbox"/> Store spill containment and control materials in a clearly marked location, readily accessible to work and storage areas. <input type="checkbox"/> The spill response kits should include: <ol style="list-style-type: none"> <li>1. Absorbent pads and booms (small and large)</li> <li>2. Empty sandbags</li> <li>3. Sewer pipe plugs</li> <li>4. Dry absorbent</li> <li>5. Square end shovels</li> <li>6. A pry bar</li> <li>7. Curtain boom (long enough to span the mouth of the marina and to completely encircle the largest vessel in moorage)</li> <li>8. Drain covers</li> <li>9. Fire extinguishers, and</li> <li>10. A copy of the facility's spill contingency plan.</li> </ol>
<u>Emergency response plans:</u>  Site plan  Hazardous materials  Designate staff actions  Marina spokesperson  Emergency numbers  Actions to be taken  Other help  Update plan  Train employees  Inform others	<input type="checkbox"/> Develop emergency response plans that include written procedures for action addressing potential emergency situations. <input type="checkbox"/> Keep the plan in an accessible location. <input type="checkbox"/> Emergency response plans should: <ol style="list-style-type: none"> <li>1. Include a site plan of the facility, showing valves, pipes, tanks, structures, roads, hydrants, docks, power and fuel shutoffs, hazardous material storage locations, telephones, and location of emergency response materials.</li> <li>2. Describe the type, amount, and location of hazardous and potentially hazardous materials stored on-site.</li> <li>3. Identify which staff member will take what action in the event of an emergency.</li> <li>4. Designate one person as the spokesperson for the marina.</li> <li>5. Include a list of emergency phone numbers for:               <ul style="list-style-type: none"> <li>o USCG National Response Center – 1 (800) 424-8802 [for spills]</li> <li>o SCDHEC Emergency Response Section at 1-888-481-0125 &amp; the National Response Center at 1-800-424-8802 [Section 311 of the Clean Water Act; 33 USC 1321].</li> <li>o Local fire and police</li> <li>o Facility owner</li> <li>o Local harbormaster</li> <li>o Neighboring marinas that have emergency response equipment</li> <li>o Spill response contractors</li> </ul> </li> <li>6. List and describe actions to be taken during an emergency and, based on likely threats, what equipment should be deployed.</li> <li>7. Indicate when additional resources should be called for assistance.</li> </ol> <input type="checkbox"/> Update the emergency response plan as necessary each year. <input type="checkbox"/> Review the emergency response plan with employees and train them on proper use of containment material. <input type="checkbox"/> Inform local fire department and harbormaster of your emergency response plan.

Spill contingency plan	<ul style="list-style-type: none"> <li><input type="checkbox"/> Develop an oil spill contingency plan, even if you are not required by law to prepare an SPCC Plan. A spill contingency plan and emergency response plan can be combined into one document.</li> <li><input type="checkbox"/> The plan should identify: <ol style="list-style-type: none"> <li>1. Potential spill sources</li> <li>2. Oil and hazardous materials used or stored in the area</li> <li>3. Spill prevention measures (e.g., security, inspection, containment, training, equipment), and</li> <li>4. Spill emergency procedures, including: <ol style="list-style-type: none"> <li>a. Contact information of marina personnel qualified to lead spill response efforts.</li> <li>b. Notification and spill containment measures.</li> </ol> </li> </ol> </li> </ul>
Severe weather checklist	<ul style="list-style-type: none"> <li><input type="checkbox"/> Develop an action checklist for severe weather. Preparations to reduce environmental risks include securing all dumpsters, removing or securing all objects that could potentially blow or wash away, and securing waterside sewage pumpouts and/or dump stations.</li> </ul>

**Relevant Sections and Appendices:**

- ⇒ Appendix A for hazardous substance management information.
- ⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
- ⇒ Appendix E for state and federal spill reporting requirements.
- ⇒ Spills section.

